

## **Project 3: Drawing a Rectangle with an Industrial Robot**

### **EGR 445/545: Project 3**

#### **Assignment**

In this assignment, each team will program an industrial robot to draw a rectangle. The rectangle will be 4" by 6". Each team may choose the surface the robot writes on and what writing instrument is used. Teams may choose to submit two different entries/programs, one designed for accuracy and one designed for speed.

#### **Deliverables**

- Demonstration of the robot following the program(s) and drawing the rectangle(s):
  - Most accurate
  - Fastest
- Written explanation of the steps taken in the program

#### **Extra Credit Opportunities**

Teams may earn extra credit by doing any of the following:

- Fixing the clamping function on the yellow Fanuc
- Designing an effective means for attaching a writing instrument to the gripper on either Fanuc

#### **Grading**

Grading will be based on the accuracy of the rectangle drawings, the speed of the drawing operation, and the written explanation of the program. Note that teams have the option of splitting drawing accuracy and drawing speed into two separate program entries.